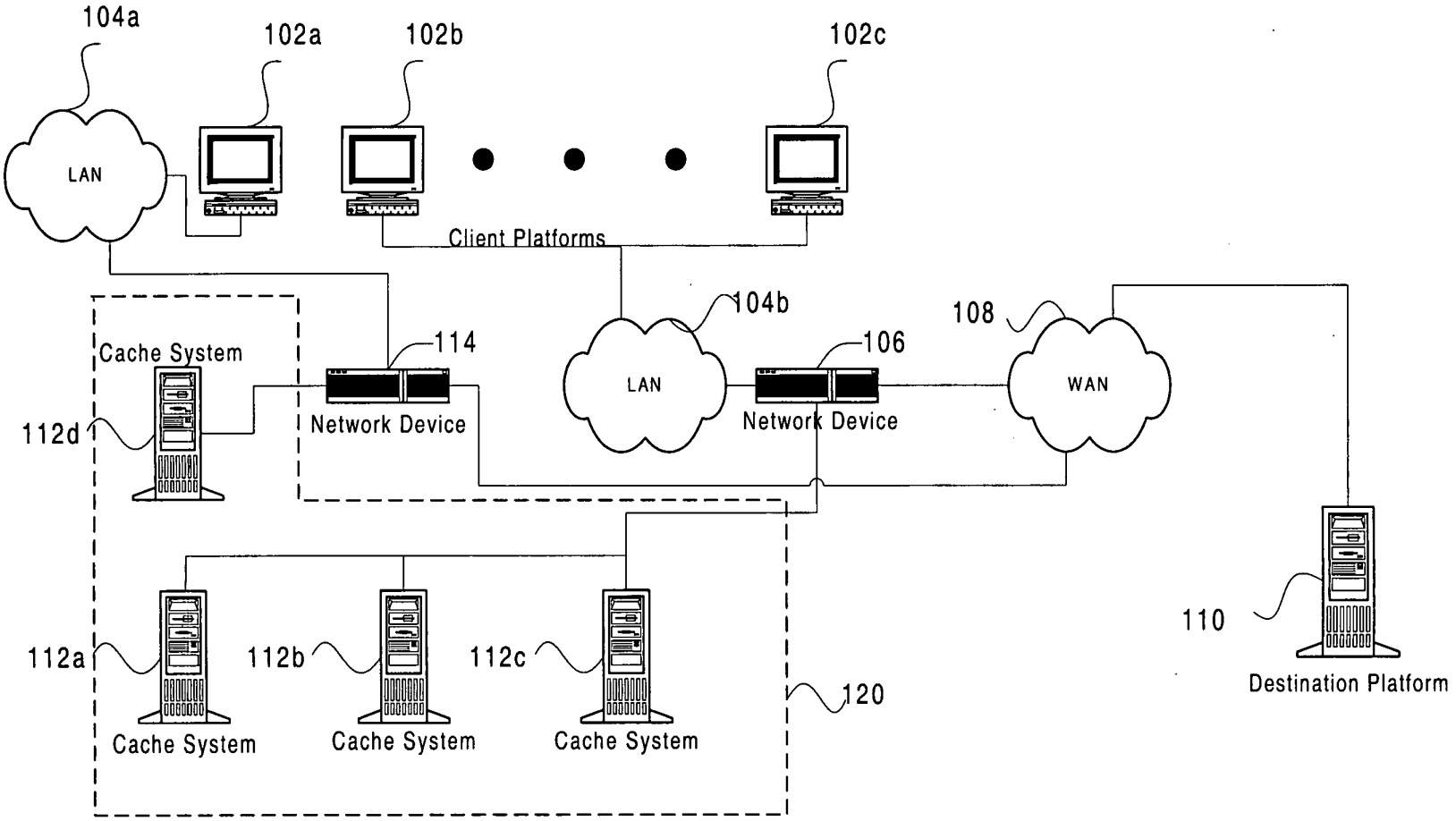
104a
102a
102b
102c
LAN
Client Platforms
104b
108
Cache System
114
106
LAN
WAN
112d
Network Device
Network Device
112a
112b
112c
120
110
Cache System
Cache System
Cache System
Destination Platform

Fig. 1

0006903 3n3b0960

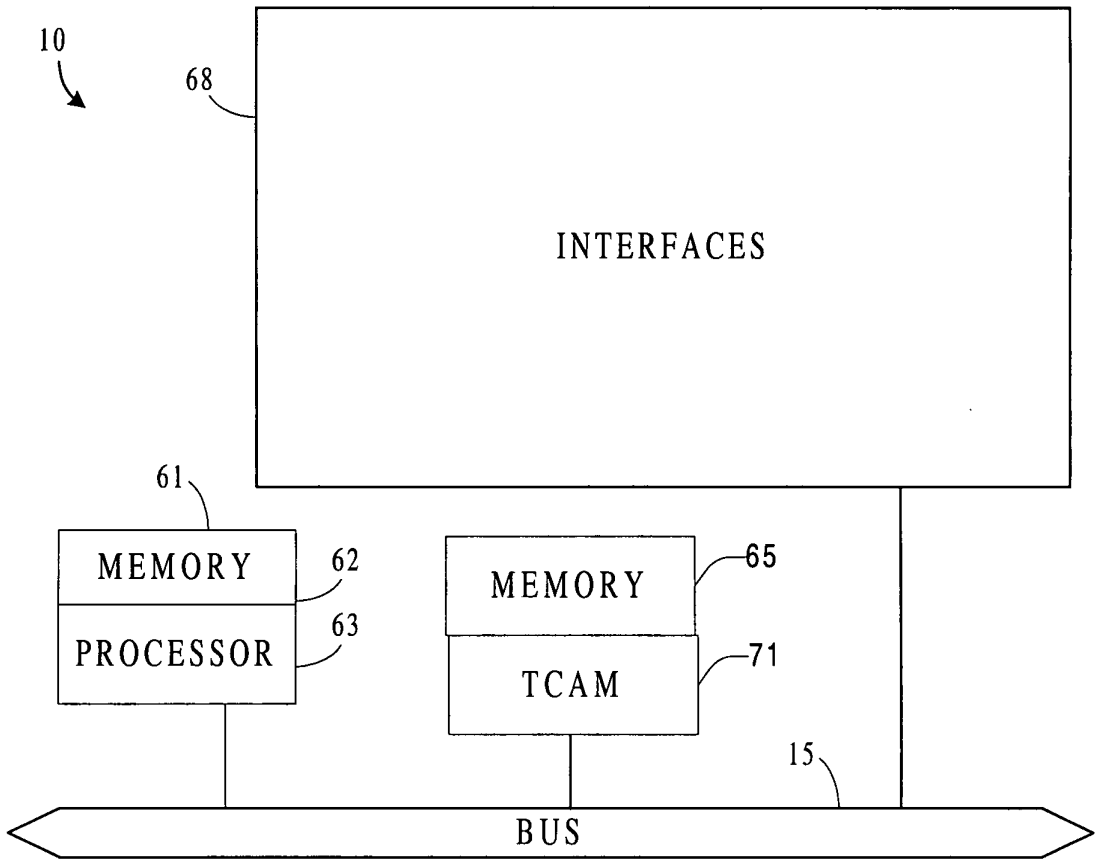

Fig. 2

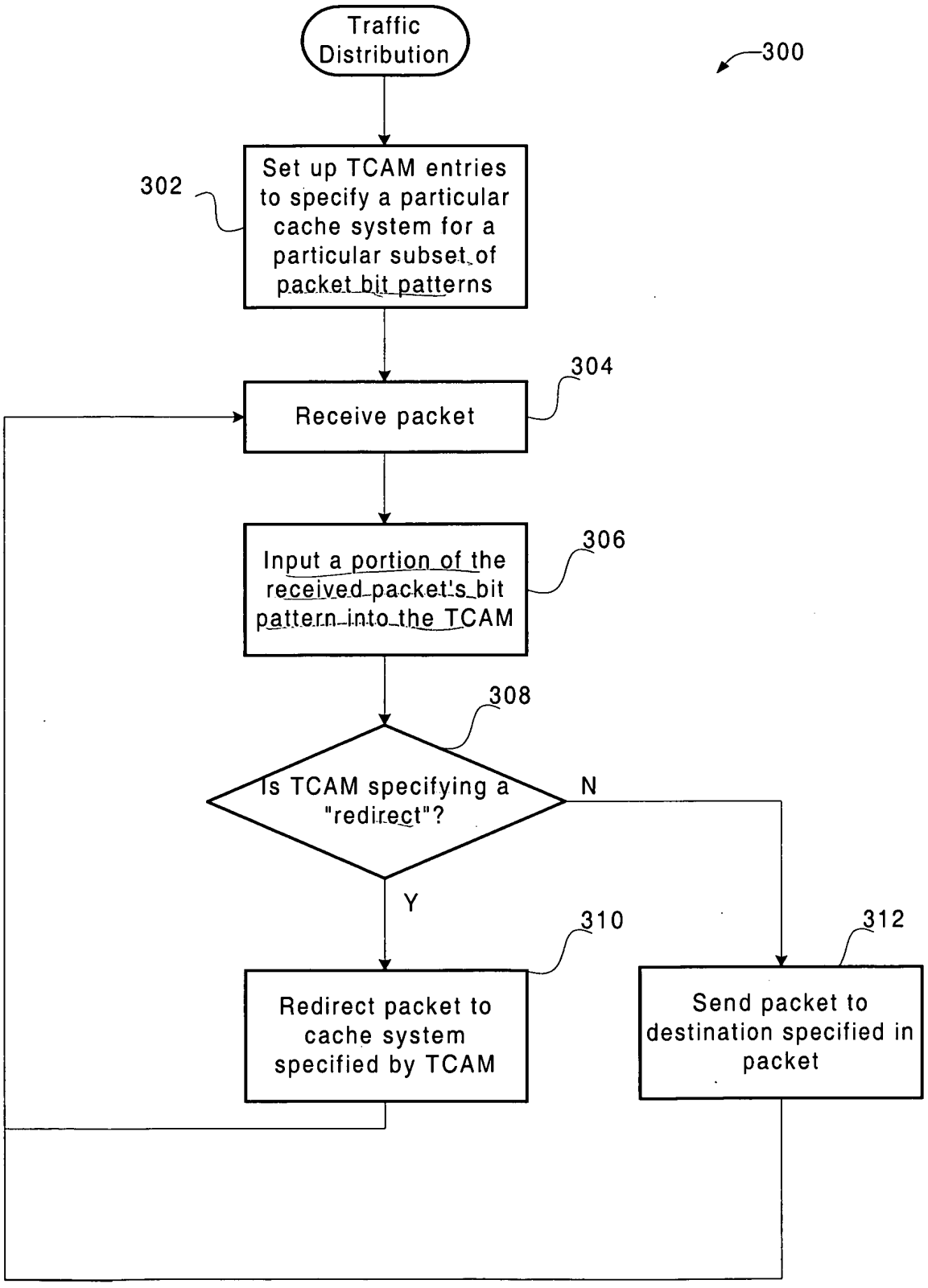
Traffic Distribution
300
302
Set up TCAM entries to specify a particular cache system for a particular subset of packet bit patterns
304
Receive packet
306
Input a portion of the received packet's bit pattern into the TCAM
308
Is TCAM specifying a "redirect"?
N
Y
310
Redirect packet to cache system specified by TCAM
312
Send packet to destination specified in packet

Fig. 3

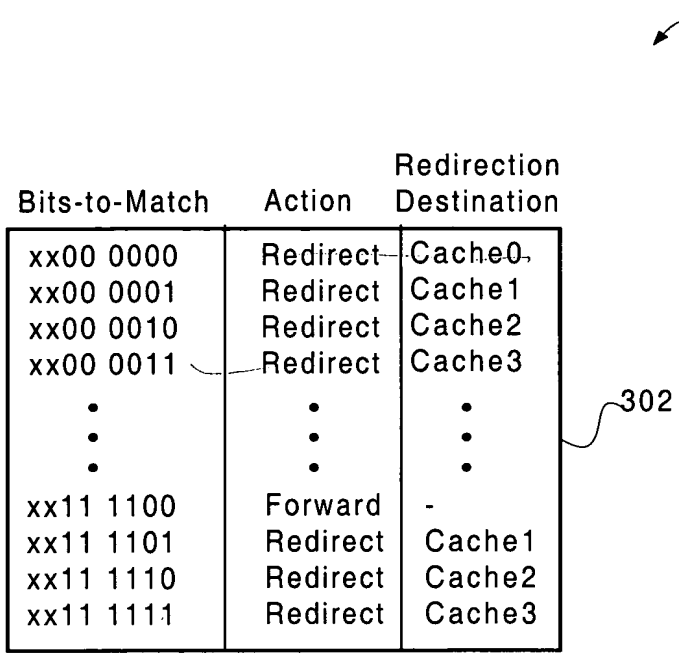
71
Bits-to-Match
Action
Redirection Destination
xx00 0000
Redirect
Cache0
xx00 0001
Redirect
Cache1
xx00 0010
Redirect
Cache2
xx00 0011
Redirect
Cache3
xx11 1100
Forward
-
xx11 1101
Redirect
Cache1
xx11 1110
Redirect
Cache2
xx11 1111
Redirect
Cache3
302

Fig. 4

bucket 0: h=00000000000000000000000000000000
bucket 1: h=00000000000000000001000000000000
bucket 2: h=00000000000000000000010000000000
bucket 3: h=00000000000000000001010000000000
bucket 4: h=00000000000000000000001000000000
bucket 5: h=00000000000000000001001000000000
bucket 6: h=00000000000000000000011000000000
bucket 7: h=00000000000000000001011000000000
bucket 8: h=00000000000000000000000100000000
bucket 9: h=00000000000000000001000100000000
bucket 10: h=00000000000000000000010100000000
bucket 11: h=00000000000000000001010100000000
bucket 12: h=00000000000000000000001100000000
bucket 13: h=00000000000000000001001100000000
bucket 14: h=00000000000000000000011100000000
bucket 15: h=00000000000000000001011100000000
bucket 16: h=00000000000000000000000001000000
bucket 17: h=00000000000000000001000001000000
bucket 18: h=00000000000000000000010001000000
bucket 19: h=00000000000000000001010001000000
bucket 20: h=00000000000000000000001001000000
bucket 21: h=00000000000000000001001001000000
bucket 22: h=00000000000000000000011001000000
bucket 23: h=00000000000000000001011001000000
bucket 24: h=00000000000000000000000101000000
bucket 25: h=00000000000000000001000101000000
bucket 26: h=00000000000000000000010101000000
bucket 27: h=00000000000000000001010101000000
bucket 28: h=00000000000000000000001101000000
bucket 29: h=00000000000000000001001101000000
bucket 30: h=00000000000000000000011101000000
bucket 31: h=00000000000000000001011101000000
bucket 32: h=00000000000000000000000000000001
bucket 33: h=00000000000000000001000000000001
bucket 34: h=00000000000000000000010000000001
bucket 35: h=00000000000000000001010000000001
bucket 36: h=00000000000000000000001000000001
bucket 37: h=00000000000000000001001000000001
bucket 38: h=00000000000000000000011000000001
bucket 39: h=00000000000000000001011000000001
bucket 40: h=00000000000000000000000100000001
bucket 41: h=00000000000000000001000100000001
bucket 42: h=00000000000000000000010100000001
bucket 43: h=00000000000000000001010100000001
bucket 44: h=00000000000000000000001100000001

Fig. 5A

bucket 45: h=00000000000000000001001100000001
bucket 46: h=00000000000000000000011100000001
bucket 47: h=00000000000000000001011100000001
bucket 48: h=00000000000000000000000001000001
bucket 49: h=00000000000000000001000001000001
bucket 50: h=00000000000000000000010001000001
bucket 51: h=00000000000000000001010001000001
bucket 52: h=00000000000000000000001001000001
bucket 53: h=00000000000000000001001001000001
bucket 54: h=00000000000000000000011001000001
bucket 55: h=00000000000000000001011001000001
bucket 56: h=00000000000000000000000101000001
bucket 57: h=00000000000000000001000101000001
bucket 58: h=00000000000000000000010101000001
bucket 59: h=00000000000000000001010101000001
bucket 60: h=00000000000000000001001101000001
bucket 62: h=00000000000000000000011101000001
bucket 63: h=00000000000000000001011101000001

Fig. 5B

bucket 0: h=00000000000000000000000000000000
bucket 1: h=00000000000000000001000000000000
bucket 2: h=00000000000000000000010000000000
bucket 3: h=00000000000000000001010000000000
bucket 4: h=00000000000000000000001000000000
bucket 5: h=00000000000000000001001000000000
bucket 6: h=00000000000000000000011000000000
bucket 7: h=00000000000000000001011000000000
bucket 8: h=00000000000000000000000100000000
bucket 9: h=00000000000000000001000100000000
bucket 10: h=00000000000000000000010100000000
bucket 11: h=00000000000000000001010100000000
bucket 12: h=00000000000000000000001100000000
bucket 13: h=00000000000000000001001100000000
bucket 14: h=00000000000000000000011100000000
bucket 15: h=00000000000000000001011100000000
bucket 16: h=00000000000000000000000001000000
bucket 17: h=00000000000000000001000001000000
bucket 18: h=00000000000000000000010001000000
bucket 19: h=00000000000000000001010001000000
bucket 20: h=00000000000000000000001001000000
bucket 21: h=00000000000000000001001001000000
bucket 22: h=00000000000000000000011001000000
bucket 23: h=00000000000000000001011001000000
bucket 24: h=00000000000000000000000101000000
bucket 25: h=00000000000000000001000101000000
bucket 26: h=00000000000000000000010101000000
bucket 27: h=00000000000000000001010101000000
bucket 28: h=00000000000000000000001101000000
bucket 29: h=00000000000000000001001101000000
bucket 30: h=00000000000000000000011101000000
bucket 31: h=00000000000000000001011101000000
bucket 32: h=00000000000000000000000000000100
bucket 33: h=00000000000000000001000000000100
bucket 34: h=00000000000000000000010000000100
bucket 35: h=00000000000000000001010000000100
bucket 36: h=00000000000000000000001000000100
bucket 37: h=00000000000000000001001000000100
bucket 38: h=00000000000000000000011000000100
bucket 39: h=00000000000000000001011000000100
bucket 40: h=00000000000000000000000100000100
bucket 41: h=00000000000000000001000100000100
bucket 42: h=00000000000000000000010100000100
bucket 43: h=00000000000000000001010100000100
bucket 44: h=00000000000000000000001100000100

Fig. 6A

bucket 45: h=00000000000000000001001100000100
bucket 46: h=00000000000000000000011100000100
bucket 47: h=00000000000000000001011100000100
bucket 48: h=00000000000000000000000001000100
bucket 49: h=00000000000000000001000001000100
bucket 50: h=00000000000000000000010001000100
bucket 51: h=00000000000000000001010001000100
bucket 52: h=00000000000000000000001001000100
bucket 53: h=00000000000000000001001001000100
bucket 54: h=00000000000000000000011001000100
bucket 55: h=00000000000000000001011001000100
bucket 56: h=00000000000000000000000101000100
bucket 57: h=00000000000000000001000101000100
bucket 58: h=00000000000000000000010101000100
bucket 59: h=00000000000000000001010101000100
bucket 60: h=00000000000000000000001101000100
bucket 61: h=00000000000000000001001101000100
bucket 62: h=00000000000000000000011101000100
bucket 63: h=00000000000000000001011101000100
bucket 64: h=00000000000000000000000000000001
bucket 65: h=00000000000000000001000000000001
bucket 66: h=00000000000000000000010000000001
bucket 67: h=00000000000000000001010000000001
bucket 68: h=00000000000000000000001000000001
bucket 69: h=00000000000000000001001000000001
bucket 70: h=00000000000000000000011000000001
bucket 71: h=00000000000000000001011000000001
bucket 72: h=00000000000000000000000100000001
bucket 73: h=00000000000000000001000100000001
bucket 74: h=00000000000000000000010100000001
bucket 75: h=00000000000000000001010100000001
bucket 76: h=00000000000000000000001100000001
bucket 77: h=00000000000000000001001100000001
bucket 78: h=00000000000000000000011100000001
bucket 79: h=00000000000000000001011100000001
bucket 80: h=00000000000000000000000001000001
bucket 81: h=00000000000000000001000001000001
bucket 82: h=00000000000000000000010001000001
bucket 83: h=00000000000000000001010001000001
bucket 84: h=00000000000000000000001001000001
bucket 85: h=00000000000000000001001001000001
bucket 86: h=00000000000000000000011001000001
bucket 87: h=00000000000000000001011001000001
bucket 88: h=00000000000000000000000101000001
bucket 89: h=00000000000000000001000101000001

Fig. 6B

bucket 90: h=00000000000000000000010101000001
bucket 91: h=00000000000000000001010101000001
bucket 92: h=00000000000000000000001101000001
bucket 93: h=00000000000000000001001101000001
bucket 94: h=00000000000000000000011101000001
bucket 95: h=00000000000000000001011101000001
bucket 96: h=00000000000000000000000000000101
bucket 97: h=00000000000000000001000000000101
bucket 98: h=00000000000000000000010000000101
bucket 99: h=00000000000000000001010000000101
bucket 100: h=00000000000000000000001000000101
bucket 101: h=00000000000000000001001000000101
bucket 102: h=00000000000000000000011000000101
bucket 103: h=00000000000000000001011000000101
bucket 104: h=00000000000000000000000100000101
bucket 105: h=00000000000000000001000100000101
bucket 106: h=00000000000000000000010100000101
bucket 107: h=00000000000000000001010100000101
bucket 108: h=00000000000000000000001100000101
bucket 109: h=00000000000000000001001100000101
bucket 110: h=00000000000000000000011100000101
bucket 111: h=00000000000000000001011100000101
bucket 112: h=00000000000000000000000001000101
bucket 113: h=00000000000000000001000001000101
bucket 114: h=00000000000000000000010001000101
bucket 115: h=00000000000000000001010001000101
bucket 116: h=00000000000000000000001001000101
bucket 117: h=00000000000000000001001001000101
bucket 118: h=00000000000000000000011001000101
bucket 119: h=00000000000000000001011001000101
bucket 120: h=00000000000000000000000101000101
bucket 121: h=00000000000000000001000101000101
bucket 122: h=00000000000000000000010101000101
bucket 123: h=00000000000000000001010101000101
bucket 124: h=00000000000000000000001101000101
bucket 125: h=00000000000000000001001101000101
bucket 126: h=00000000000000000000011101000101
bucket 127: h=00000000000000000001011101000101

0005 5101 6644 5500 0000

Fig. 6C